IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A method of ~~simulation, wherein~~ <u>simulating</u> variations in ~~an electrical characteristic of a device constituting~~ <u>first and second electrical</u> <u>characteristics of</u> a semiconductor integrated circuit ~~are represented in the form of a corner model including at least one corner defining a limit of the variations, said method comprising the steps of,~~ <u>the method comprising</u>:

<u>(a)</u>   <u>forming a corner model including at least one corner defining predetermined</u> <u>limits of said variations of said first and second electrical characteristics;</u>

[[(a)]] <u>(b)</u>   ~~preparing a predetermined value tolerable for the~~ <u>assigning said</u> variations in said ~~electrical characteristic~~ <u>first and second electrical characteristics</u> at said at least one corner <u>as respective predetermined values</u>;

[[(b)]] <u>(c)</u>   performing a circuit simulation to determine ~~a device parameter sensitivity which is the derivative of said electrical characteristic~~ <u>respective device parameter</u> <u>sensitivities of said first and second electrical characteristics at said at least one corner, the</u> <u>device parameter sensitivities representing respective derivatives of said first and second</u> <u>electrical characteristics</u> with respect to a device parameter ~~indicative of information about said device~~; and

[[(c)]] <u>(d)</u>   applying said device parameter ~~sensitivity~~ <u>sensitivities</u> and said predetermined value ~~of said electrical characteristic~~ to the normal equation of the least squares method<u>, and solving the normal equation</u> to determine variations in said device parameter at said at least one corner.

Claim 2 (Currently Amended): The method according to claim 1,

wherein said device parameter includes at least one of a model parameter regarding

the shape of said <u>semiconductor integrated circuit</u> ~~device~~ and a process parameter regarding a

condition during the steps of manufacturing said semiconductor integrated circuit.

Claim 3 (Currently Amended): The method according to claim 1, further comprising<u>:</u>

~~the step of~~

~~(d)~~ <u>(e)</u> calculating the variations in said ~~electrical characteristic~~ <u>first and second</u>

<u>electrical characteristics</u> at said at least one corner, based on [[the]] <u>a</u> multiplication of said

device parameter ~~sensitivity~~ <u>sensitivities</u> provided in said step [[(b)]] <u>(c)</u> and the variations in

said device parameter at said at least one corner provided in said step [[(c)]] <u>(d)</u>.

Claim 4 (Currently Amended): The method according to claim 3,

wherein a comparison is made between the variations in said ~~electrical characteristic~~

<u>first and second electrical characteristics</u> ~~at said at least one corner~~ calculated in said step

[[(d)]] <u>(e)</u> and said predetermined ~~value~~ <u>values</u> prepared in said step [[(a)]] <u>(b)</u>, and[[,]]

if ~~an error of said electrical characteristic is~~ <u>a difference between said variations and</u>

<u>said predetermined values of said first and second electrical characteristics is</u> greater than

~~another predetermined~~ <u>a prescribed</u> value, said steps [[(b)]] <u>(c)</u> through [[(d)]] <u>(e)</u> are

executed again.

Claim 5 (Currently Amended): The method according to claim 3,

wherein a comparison is made between the variations in said ~~electrical comparison~~

<u>first and second electrical characteristics</u> ~~at said at least one corner~~ calculated in said step (d)

and said predetermined ~~value~~ <u>values</u> prepared in said step [[(a)]] <u>(b)</u>, and[[,]]

if ~~an error of said electrical characteristic is~~ a difference between said variations and

said predetermined values of said first and second electrical characteristics is greater than

~~another predetermined~~ a prescribed value, ~~a new device parameter is introduced to execute~~

said steps [[(b)]] (c) through [[(d)]] (e) are repeated using [[said] a new device parameter and

said device parameter in combination.

Claim 6 (Currently Amended): The method according to claim 1,

wherein said device parameter includes a plurality of device parameters, and

wherein said step [[(c)]] (d) is not executed upon at least one of said device

parameters, but is instead executed upon only [[the]] a remainder of said plurality of device

parameters.

Claim 7 (Currently Amended): The method according to claim 1,

wherein said variations in said device parameters are determined using the weighted

least squares method ~~in said step (c)~~.

Claim 8 (Currently Amended): A device for ~~simulation, said device using a method~~

~~of simulation as recited in claim 1 to represent the variations in said electrical characteristic~~

~~of said device in the form of said corner model,~~ simulating variations in first and second

electrical characteristics of a semiconductor integrated circuit by (a) forming a corner model

including at least one corner defining predetermined limits of said variations of said first and

second electrical characteristics, (b) assigning said variations in said first and second

electrical characteristics at said at least one corner, as respective predetermined values, (c)

performing a circuit simulation to determine respective device parameter sensitivities of said

first and second electrical characteristics at said at said at least one corner, the respective

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device parameter sensitivities representing respective derivatives of said first and second

electrical characteristics with respect to a device parameter, and (d) applying said device

parameter sensitivities and said predetermined values to the normal equation of the least

squares method, and solving the normal equation to determine variations in said device

parameter at said at least one corner, said device comprising:

a data input unit configured to input ~~means for inputting~~ said predetermined ~~value~~

~~tolerable for the variations in said electrical characteristic~~ values;

~~data output means;~~

a simulator ~~for simulating the amount of change in said electrical characteristic as~~

~~would occur~~ configured to simulate the variations in said first and second electrical

characteristics, when said device parameter is changed, in order to determine said device

parameter ~~sensitivity~~ sensitivities; and

a data processing unit configured to apply ~~means for applying~~ said device parameter

~~sensitivity~~ sensitivities determined by said simulator and said predetermined ~~value of said~~

~~electrical characteristic~~ values inputted to said data input ~~means to the normal~~ unit to the

normal equation of the least squares method, to determine variations in said device parameter

at said at least one corner, ~~thereby outputting~~ and to output the variations in said device

parameter at said at least one corner ~~to said data output means~~.

Claim 9 (Currently Amended): The device according to claim 8, further comprising:

a data storage section ~~for storing therein~~ configured to store data about said device

parameter ~~sensitivity~~ sensitivities and data about [[the]] said variations in said device

parameter.

Claim 10 (New): A device for simulating variations in first and second electrical characteristics of a semiconductor integrated circuit by (a) forming a corner model including at least one corner defining predetermined limits of said variations of said first and second electrical characteristics, (b) assigning said variations in said first and second electrical characteristics at said at least one corner, as respective predetermined values, (c) performing a circuit simulation to determine respective device parameter sensitivities of said first and second electrical characteristics at said at said at least one corner, the respective device parameter sensitivities representing respective derivatives of said first and second electrical characteristics with respect to a device parameter, and (d) applying said device parameter sensitivities and said predetermined values to a normal equation of the least squares method, and solving the normal equation to determine variations in said device parameter at said at least one corner, said device comprising:

a data input unit configured to input said predetermined values;

a simulator configured to simulate the variations in said first and second electrical characteristics, when said device parameter is changed, in order to determine said device parameter sensitivities; and

data processing means for applying said device parameter sensitivities determined by said simulator and said predetermined values inputted to said data input unit to the normal equation of the least squares method, for determining variations in said device parameter at said at least one corner, and for outputting the variations in said device parameter at said at least one corner.

Claim 11 (New): The device according to claim 10, further comprising:

a data storage section configured to store data about said device parameter sensitivities and data about said variations in said device parameter.